

ABSTRACT

OPTICAL TRANSMISSION OF ERROR CONTROL DATA

5 The present invention provides a method of optical data transmission whereby digital information data and its associated error control data may be transmitted via an optical transmission line without requiring an increase in the transmission bit rate of the information data. It will be clear that this may be achieved, according to the present invention, by obviating the need to transmit information data and its associated error control data together via the same WDM transmission channel. That is to say, a subset of one or more WDM transmission channels is used in transmitting data of the first type, but not simultaneously used in transmitting data of the second type. The data of the second type is transmitted via a different subset of one or more other WDM transmission channels.

20 In this way, the present invention aims to mitigate the aforementioned penalties associated with increasing the bit rate on an optical transmission channel in order to accommodate redundant bits associated with bit error control. In particular, by transmitting channel-encoded data employing wavelength division multiplexing (WDM) the present invention provides a method whereby one subset of the WDM channels of an optical transmission line is employed for the transmission of data including information data ('information channels') but excluding error data, and another separate subset is employed for the transmission of the error control data ('error channels') associated with aforementioned information data

(e.g. check bits, bytes or symbols in the case of e.g. RS codes).

5 Fig. 2